

**REMARKS**

Reconsideration of this Application is respectfully requested.

Applicants wish to thank Examiner Yu and Examiner Helms for the courtesy of an in-person interview on October 12, 2004 and Examiner Yu for the courtesy of a telephonic interview on October 14, 2004.

Upon entry of the foregoing amendments, claims 2, 4-10, 12-14, 25-29, 31-33, 35, 37-39 and 41-60 are pending in the application, with claims 2, 4, 8, 27, 39, 46, 48 and 54 being the independent claims. Claims 11, 24, 30, 34, 36 and 40 are hereby cancelled without prejudice, in order to simplify the set of claims. Claims 2, 4, 8-9, 13-14, 26, 29, 38-39, 42 and 44-45 are sought to be amended and new claims 46-60 are sought to be added. These changes are believed to introduce no new matter, and their entry is respectfully requested.

The amendments to claims 2, 4, 8-9, 13-14, 26, 29, 38-39, 42 and 44-45 are merely of an editorial nature. Claims 2(e) and 39(e) now recite that the claimed nucleic acid sequence does not hybridize to a specific sequence of SEQ ID NOs:3 and 4. This amendment has been made to be consistent with the same language relating to SEQ ID NOs:1 and 6. As suggested by the Examiner, the "probe or primer" language has been inserted in "(e)" of claims 2, 39, 46 and 54. As also suggested by the Examiner, "wherein said nucleotide sequence is over-expressed in prostate cancer tissue as compared to normal human tissues" has been inserted in "(c)" and "(d)" of claims 2, 39, 46, and 54. The sequences of the different exons recited in claim 8 were introduced to better define the claimed subject matter. Support for these sequences can be found, for example, in Table 2 between pages 27 and 28.

Newly added independent claims 46, 48 and 54 are identical to claims 2, 8 and 39, respectively, except that they do not recite the proviso regarding hybridization or the tissues or cell lines in which PCA3 sequences can be detected. Support for claims 46, 48 and 54 can be found, for example, at page 27, lines 1-4. Further support for claim 54 can be found at page 68, lines 13-14, which lists cancer cell lines. Similarly, support for the normal tissues recited in new claim 60 can be found at page 68, lines 11-13.

Except for their dependencies, the newly added dependent claims are identical to those on which they are based. More specifically, claim 47 finds support in claims 6 and 7;

new claims 48-50 find support in claims 8-10, respectively; new claims 51-53 find support in claims 12-14, respectively; and, new claims 55-59 find support in claims 41-45, respectively.

The above amendments to the claims have been made solely to expedite prosecution of the above-identified application and should not be taken as acquiescence to the Office's rejections.

As discussed at the in-person interview, the addition of new claims 46-60 necessitate adding William Isaacs as an inventor of the captioned application. Accordingly, documents that request the addition of William Isaacs to the inventive entity are filed herewith.

#### **SEQUENCE RULES AND OBJECTION TO THE SPECIFICATION**

Applicants respectfully submit that a new sequence listing to recite the sequence shown in Figure 4 is not necessary in view of the above amendment to the figure legend of Figure 4. As discussed at the in-person interview, the Examiner agreed that the amendment to the figure legend is sufficient and a new sequence listing is not required.

#### **REJECTIONS UNDER 35 U.S.C. § 112, first and second paragraphs**

The rejection of claims 2, 11-26 and 39-45 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement is respectfully traversed. The Office stated that "[t]his rejection is made because the base claims 2 (e), and 39 (e) are drawn to a genus of various hybridizing nucleic acid molecules. This rejection will be withdrawn if the claims are drawn to primer or probe capable of detecting the nucleic acid molecules . . . ." (OA at page 3).

As discussed at the interview, the Office's own Written Description Guidelines, as evidenced in the PTO's Revised Interim Written Description Guidelines Training Materials (1999) ("Training Materials"), state that claims directed to a genus of nucleic acid molecules that specifically hybridize under highly stringent conditions to a particular nucleic acid molecule with a known sequence have adequate written description. *See* Training Materials, Example 9 at pages 35-37 ("Example 9"). The claim in Example 9 is directed to a genus of hybridizing molecules and is limited to those nucleic acid molecules that encode a specific protein. As discussed at the interview, however, PCA3 comprises a potential open reading frame and, at this time, appears to be a non-coding transcript, only having the potential to

frame and, at this time, appears to be a non-coding transcript, only having the potential to encode a PCA3 protein. Moreover, numerous non-coding sequences of PCA3 are taught to have utility in prostate cancer diagnosis. Accordingly, such language ("encoding") would be inappropriate in a claim to probes or primers hybridizing to PCA3, because most of these probe or primer sequences hybridize to non-coding PCA3 sequences (e.g. exons 1, 2, 4b, 4c and 4d).

PCA3 was identified by the inventors of the above-identified application as a highly sensitive transcript in prostate cancer versus normal tissue. Accordingly, claim 2(e) states that "a probe or primer that hybridizes under high stringency conditions to any of the nucleotide sequences in (a), (b), (c) or (d) . . . selectively hybridizes to polynucleotides over-expressed in prostate cancer tissue as compared to normal human tissues . . . ." Such functional language for a non-coding RNA probe or primer is analogous to the open reading frame language in Example 9.

As also discussed at both the in-person and telephonic interviews, as of the filing date, the inventors had characterized PCA3 well beyond that of an EST sequence. For example, both PCA3 exons and splice variants are described in the specification. *See*, for example, page 17, lines 16-26 of the Specification. The pending claims directed to PCA3, therefore, are not "EST" claims in that, in contrast to the claimed nucleic acid molecules, EST sequences are only very partially characterized. Accordingly, claims 2, 11-26 and 39-45 are adequately described and, taken in view of the knowledge and skill in the art, one skilled in the art would recognize from the disclosure that the applicant was in possession of the claimed invention as of the filing date.

**The further rejection of claims 2, 11-14 and 39-45 under 35 U.S.C. § 112, first paragraph**, as allegedly failing to comply with the enablement requirement is respectfully traversed. The Office has stated that "[t]his rejection is made because the base claims 2 (e) and 39 (e) are drawn to a genus of various hybridizing molecules. If the claims are drawn to primer or probe, this rejection will be withdrawn." (OA at page 4). Claims 2(e) and 39(e) have been clarified by reciting a "probe or primer." The withdrawal of this rejection is

therefore respectfully requested. As discussed at the in-person interview on October 12, 2004, the Examiner agreed to withdraw this rejection.

For all of the reasons noted above, withdrawal of the rejection of claims 2, 11-26 and 39-45 under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description and enablement requirements is respectfully requested.

**The rejection of claims 2, 4-14 and 24-45 under 35 U.S.C. § 112, second paragraph**, as allegedly being indefinite is respectfully traversed. The Office has stated that "[t]his rejection is made because [of] the new limitation of base claims 'An isolated nucleic acid molecule which functions as a probe or primer for the selective detection of prostate cancer tissue **comprising** a polynucleotide sequences [sic] selected from the group consisting of . . . ". Because the recitation that the molecule "functions as a probe or primer" has been deleted from the preamble of the claims at issue, it is respectfully submitted that this rejection has been overcome. As discussed at the in-person interviews, Examiner Yu agreed that this amendment to the claims is sufficient to overcome this rejection.

Accordingly, withdrawal of the rejection of claims 2, 4-14 and 24-45 under 35 U.S.C. § 112, second paragraph, is respectfully requested.

**CONCLUSION**

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider and withdraw all presently outstanding rejections. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

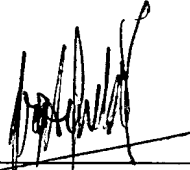
Respectfully submitted,

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.

Date: \_\_\_\_\_

12/23/04

by \_\_\_\_\_



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